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*Attorneys for Electrical District Number Eight
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Drainage District*

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

DOUG LITTLE, Chairman
BOB STUMP
BOB BURNS
ANDY TOBIN
TOM FORESE

Arizona Corporation Commission

DOCKETED

DEC 28 2016

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IN THE MATTER OF THE
APPLICATION OF ARIZONA PUBLIC
SERVICE COMPANY FOR A HEARING
TO DETERMINE THE FAIR VALUE OF
THE UTILITY PROPERTY OF THE
COMPANY FOR RATEMAKING
PURPOSES, TO FIX A JUST AND
REASONABLE RATE OF RETURN
THEREON, TO APPROVE RATE
SCHEDULES DESIGNED TO DEVELOP
SUCH RETURN

Docket No. E-01345A-16-0036

IN THE MATTER OF FUEL AND
PURCHASED POWER PROCUREMENT
AUDITS FOR ARIZONA PUBLIC
SERVICE

Docket No. E-01345A-16-0123

**NOTICE OF FILING DIRECT
TESTIMONY OF JAMES D.
DOWNING**

Electrical District Number Eight and McMullen Valley Water Conservation & Drainage
District (hereinafter collectively referred to as "ED8/McMullen"), through its undersigned
counsel, hereby provides notice that it has this day filed the attached direct testimony of
James D. Downing.

1 DATED this 28 day of December, 2016.

2 MOYES SELLERS & HENDRICKS

3
4 

5 Jason Y. Moyes
6 Jay I. Moyes

7 *Attorneys for Electrical District Number*
8 *Eight and McMullen Valley Water*
9 *Conservation & Drainage District*
10 E-mail: jimoyes@law-msh.com
11 jasonmoyes@law-msh.com
12 jim@harcuvar.com

13 ORIGINAL and 15 COPIES of
14 the foregoing filed this
15 28 day of December, 2016, with:

16 Docket Control
17 Arizona Corporation Commission
18 1200 West Washington
19 Phoenix, Arizona 85007

20 COPIES of the foregoing mailed this
21 28 day of December, 2016 to:

22 Tom Broderick, Director
23 Utilities Division
24 Arizona Corporation Commission
25 1200 W. Washington
26 Phoenix, AZ 85007

27 Janice Alward, Chief Counsel
28 Legal Division
Arizona Corporation Commission
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Phoenix, AZ 85007

1 Dwight Nodes
2 Arizona Corporation Commission
3 Hearing Division
4 1200 W. Washington
5 Phoenix, AZ 85007

6 Patricia Ferre
7 P O Box 433
8 Payson, AZ 85547

9 COPIES of the foregoing
10 Electronically mailed this
11 28 day of December 2016, to:

12 All Parties of Record.

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**DIRECT TESTIMONY OF JAMES D. DOWNING
ON BEHALF OF ELECTRICAL DISTRICT NUMBER EIGHT AND
MCMULLEN VALLEY WATER CONSERVATION & DRAINAGE
DISTRICT**

No. E-01345A-16-0036 and E-01345A-16-0123

I. INTRODUCTION

Q: PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.

A: My name is James D. Downing. My business address is 66768 Hwy 60, Salome, AZ 85354. I am a licensed Professional Engineer.

Q: WHAT IS YOUR PROFESSIONAL BACKGROUND?

A: I have over 29 years of experience working with APS and other utilities in the areas of rate design and cost calculations for transmission, distribution, ancillary services, line extensions, and wholesale power and energy sales. During this time I have helped design electricity rates for municipal and agricultural districts, including the two entities I am representing today. I have also provided engineering services for residential, commercial, and industrial developments that APS serves as retail customers—particularly regarding the extension of APS' delivery system to these developments. My Statement of Qualifications is attached to this direct testimony.

Q: PLEASE EXPLAIN THE PROFESSIONAL CAPACITY IN WHICH YOU ARE PROVIDING TESTIMONY IN THIS CASE.

A: I am President of The Harcuvar Company ("Harcuvarco"), an engineering, consulting and management company. Harcuvarco provides contract management and administrative services to Electrical District Number Eight located in Maricopa and Yuma Counties, Arizona, and McMullen Valley Water Conservation & Drainage District located in La Paz County, Arizona. Under Harcuvarco's contract I serve as Administrator for those two districts, which have jointly intervened in this proceeding and are collectively identified by procedural order for convenience as "ED8/McMullen".

1
2 **Q: HAVE YOU TESTIFIED IN ANY OTHER PROCEEDINGS BEFORE THE**
3 **ARIZONA CORPORATION COMMISSION (“ACC”)?**

4 A: Yes, I have testified in the past on behalf of private water companies.
5

6 **Q: PLEASE DESCRIBE ANY OTHER INTERESTS YOU HAVE IN THIS**
7 **CASE?**

8 A: I am personally interested as a residential retail customer of Arizona Public Service
9 Company (“APS”); however, I have not personally intervened in this proceeding.
10

11 **II. SUMMARY**

12 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

13 A: The purpose of my testimony is to present in a concise and summary form, using
14 depictive graphs, certain analyses of basic data reflecting an overview of key
15 changes in the economic results of APS’ electric business activity for the subject
16 period of 2004 through and including 2015, the test year in this case. I summarize a
17 number of key data points, calculate several key ratios between certain key data, and
18 quantify the changes and trends in those data points and ratios over those years. My
19 summary, “down to basics” analyses disclose what should be self-evident concerns
20 regarding those changes in key ratios, which ought to be troubling to APS ratepayers
21 and, more directly, troubling to the Arizona Corporation Commissioners and their
22 staff.
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1 III. CHANGES IN CERTAIN KEY DATA AND RATIOS REFLECT TRENDS THAT
2 SHOULD CAUSE REGULATORS CONCERN ABOUT INCREASES IN APS'
3 RATE BASE AND REVENUE REQUIREMENTS.
4

5 **Q: WHAT ARE THE SOURCES OF THE DATA POINTS RELIED UPON AND**
6 **PRESENTED IN YOUR ANALYSES?**

7 A: The *Annual Statistical Reports* published on APS' parent company, Pinnacle West
8 Capital Corporation's, website:

9 www.pinnaclewest.com/investors/reports/annual-statistical-report.aspx
10

11 **Q: PLEASE PRESENT YOUR POINTS OF DATA AND ANALYSES, USING**
12 **THE ACCOMPANYING SUPPORTING GRAPHS, WHICH YOU**
13 **CONSIDER MOST RELEVANT TO AN OBJECTIVE OVERVIEW OF THE**
14 **CHANGES IN APS' ECONOMIC RESULTS IN RECENT YEARS.**
15

16 1. Let's look first at Graph 1 (attached) which depicts APS' retail
17 revenue dollars per megawatt hour ("mwh") sold, for years 2004
18 through 2015. During that time ("the subject period") APS' total retail
19 revenue per mwh of sales has increased from \$77.48 per mwh to
20 \$117.57 per mwh – a compound annual growth rate ("CAGR") of
21 3.86%.

22
23 Revenue requirement ("RR") can be expressed as the product of equity
24 ("Eq") times return on equity ("ROE"), plus expenses ("E"), or ... RR
25 $= [Eq \times ROE] + E$. Here, Eq is APS' published stockholder's equity;
26

1 and ROE is APS' published after-tax net income ("NI") divided by Eq.
2 or... $ROE = NI \div Eq$. For the subject period, ROE has averaged 8.27%
3 per year. Eq has averaged 40% of APS' depreciated utility plant
4 ("DUP").
5

6 2. Graph 2 depicts APS' peak demand ("PD") during the subject
7 period. Since 2008, PD *decreased* from 7,277 megawatts ("mw") to
8 7,031 mw.
9

10 3. Graph 3 depicts APS' retail sales ("RS") per year during the
11 subject period, showing a CAGR of 0.89% for the entire period. But,
12 since 2007, RS has *decreased* from 29,171 gigawatt hours ("gwh") to
13 27,950 gwh.
14

15 4. From Graph 4 we see that APS' depreciated utility plant
16 ("DUP"), has *increased* during the subject period from \$6,258,358,000
17 to \$11,804,976,000 -- a CAGR of 5.94%.
18

19 5. Graph 5 shows that during the subject period APS' annual
20 capital expenditures ("CapEx") have increased from \$666,717,000 to
21 \$1,072,053,000 -- a CAGR of 4.41%.
22

23 6. Graph 6 depicts that APS' depreciated utility plant per mwh of
24 retail sales has grown during the subject period from \$246.85 per mwh
25 to \$422.35 per mwh -- a CAGR of 5.0%.
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7. Graph 7 shows APS' depreciated utility plant growth proportionate to peak demand. $DUP \div PD$ has grown during the subject period from \$1,002.17 per kw to \$1,678.99 per kw of peak demand – a CAGR of 4.80%.

8. Graph 8 tracks the increase in APS stockholders' equity –Eq – during the subject period, growing from \$2,503,343,000 to \$4,679,254,000, for a CAGR of 5.85%. This has resulted in the growth of stockholders' equity proportionate to APS' peak demand, $Eq \div PD$, from \$401.00 per kw to \$666.00 per kw – for a CAGR of 4.72%.

9. Graph 9 depicts APS' net income growth during the subject period proportionate to peak demand, $NI \div PD$, from \$31.97 per kw to \$64.04 per kw – for a CAGR of 6.52%.

10. Graph 10 charts APS' annual net income growth proportionate to shareholders' equity, $NI \div Eq$, which has increased from 7.97% to 9.62% -- a CAGR of 1.72%.

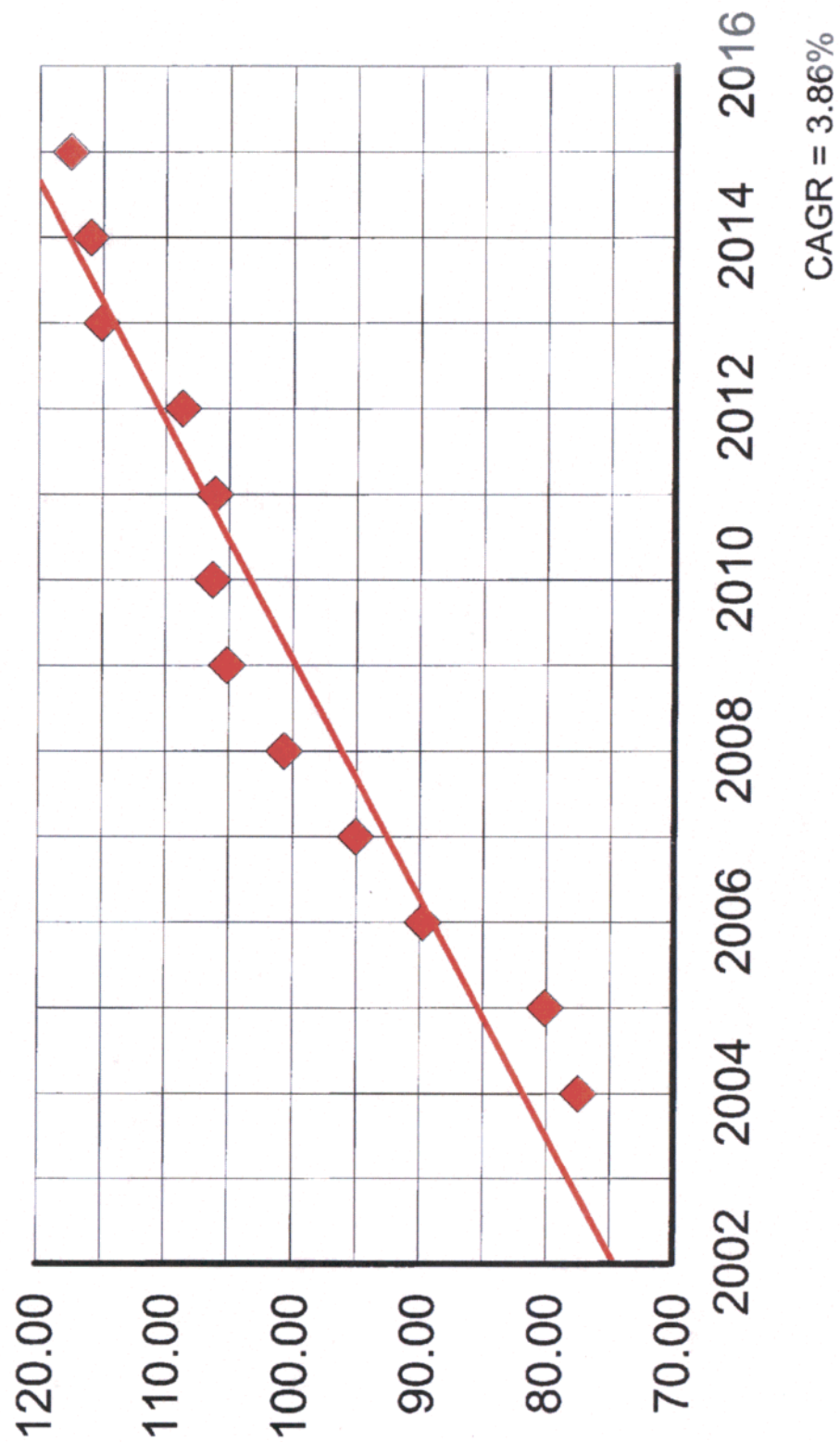
11. Revisiting Graph 5, the growth in APS' capital expenditures can be separated into material costs, labor costs, equipment costs and construction overhead. The National Estimators Guide is a nationally published standard industry guide relied upon by key construction estimating databases. It shows that, on the average, construction

1 overhead is charged at 17.5% of the combined material, labor and
2 equipment costs of a project. I have had extensive experience dealing
3 with APS' construction projects and costs. In those dealings, APS
4 personnel are consistently unwilling, as a matter of company policy, to
5 disclose APS' construction costs, and more especially the construction
6 *overhead* percentage of total construction charges. On December 19,
7 2016, APS responded to ED8/McMullen's Second Set of Data
8 Requests asking for a breakdown of APS' construction costs. And
9 while APS did provide some general answers, I believe the
10 Commission and Staff need to take a much closer and detailed look at
11 the various components that make up APS' construction overhead.
12 Based on my experience and making rational assumptions about APS'
13 buying leverage as a major bulk purchaser of material and equipment,
14 and calculating from the total job costs charged by APS for numerous
15 line extension and other projects, it is my reasoned estimate that APS'
16 construction overhead charges are about 45%, or 2.57 times that of the
17 average electrical contractor. That differential translates into the
18 addition to CapEx of significant dollars that become rate base, instead
19 of merely expenses on which APS earns no return. In the context of a
20 rate case, APS' inflated CapEx overhead charges result in its rate base,
21 stockholders' equity, and revenue requirement being unduly increased.
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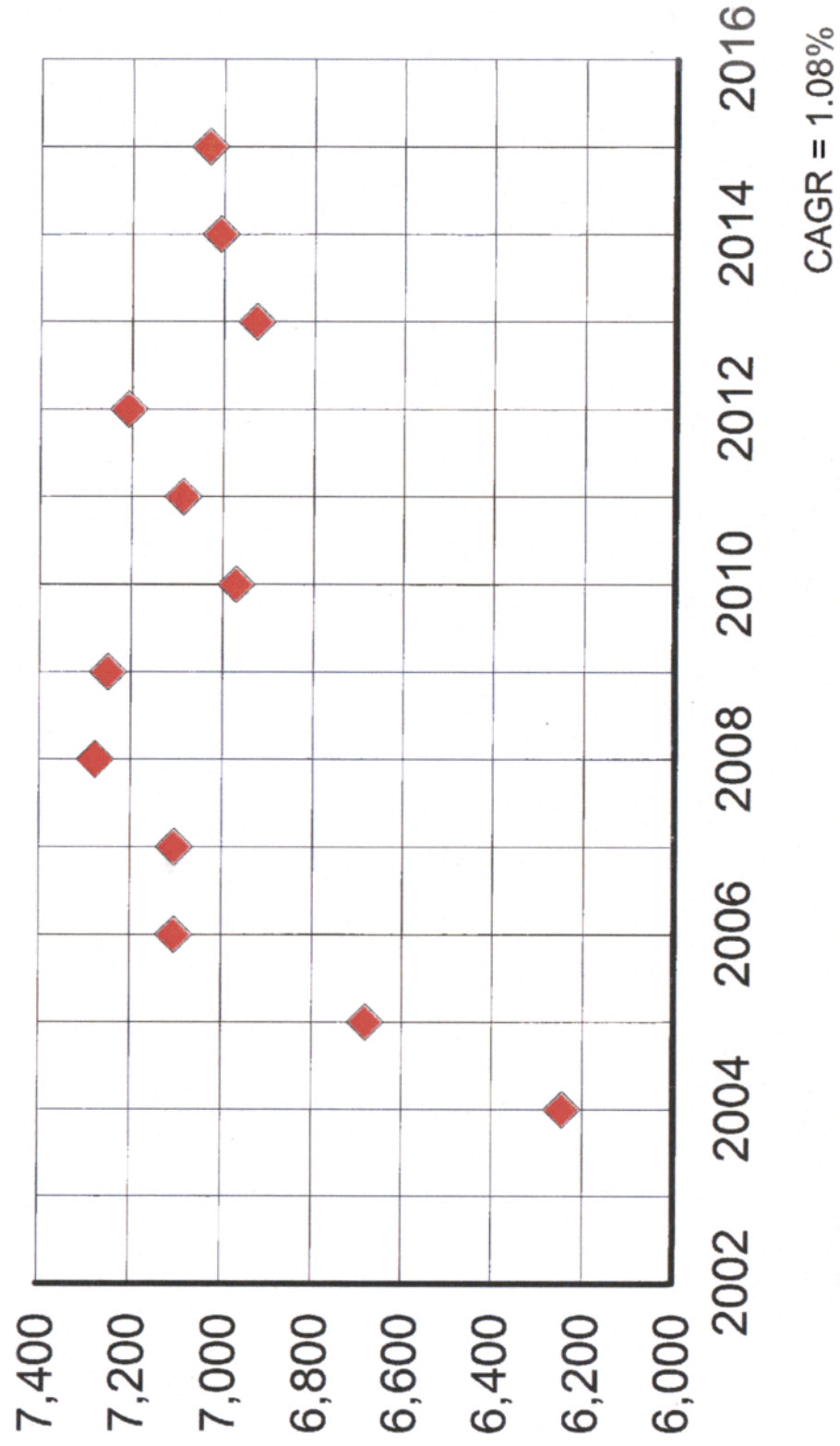
1 IV. CONCLUSION

2 APS should be required to disclose in more detail its construction costs, particularly
3 construction overhead charges as additions to capital expenditures. The ACC should
4 be very concerned about the continuing growth in APS' plant and rate base
5 notwithstanding declining demand and sales.
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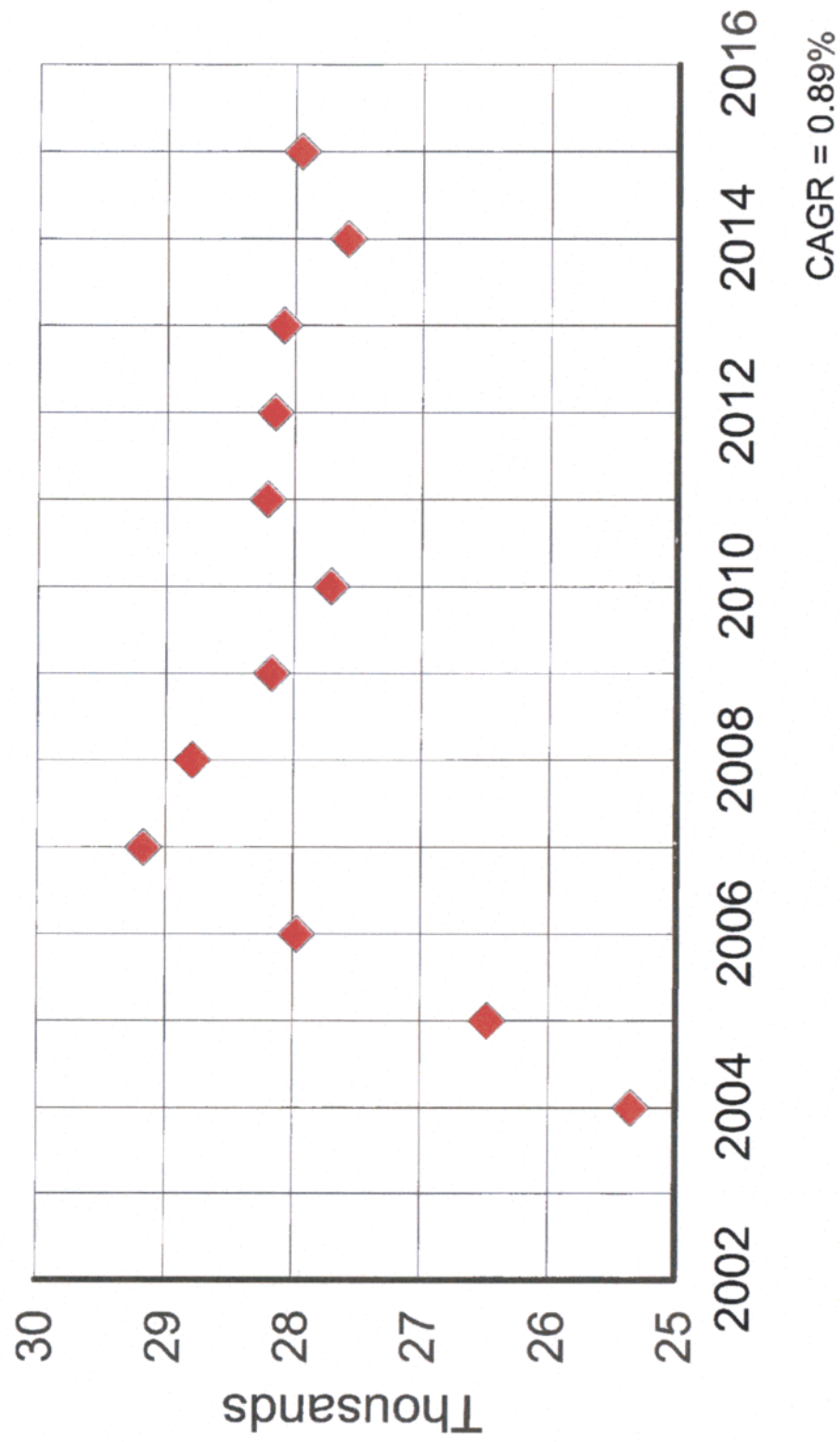
APS Retail Revenue \$/mwh
Graph 1



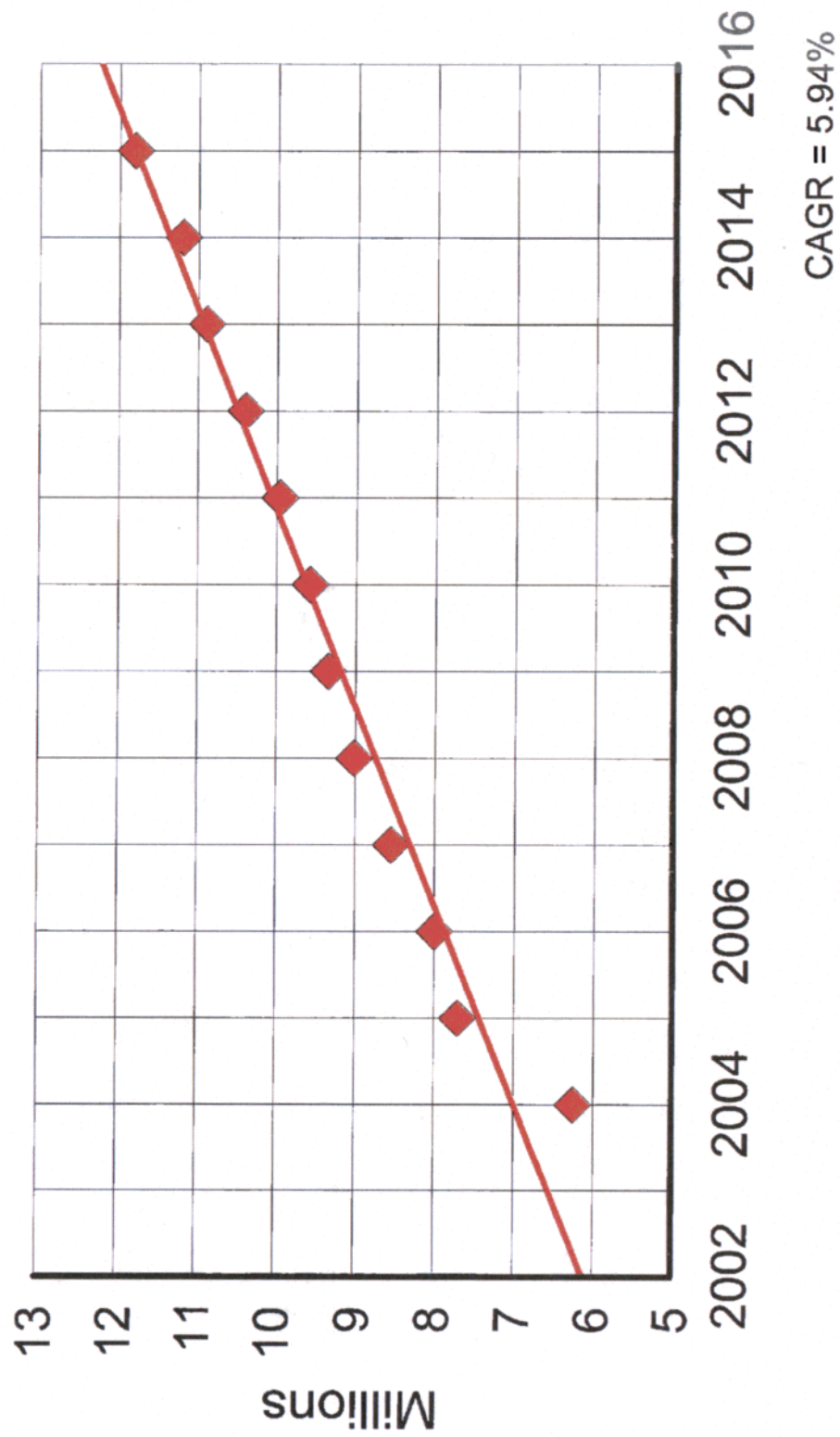
APS Peak Demand mw
Graph 2



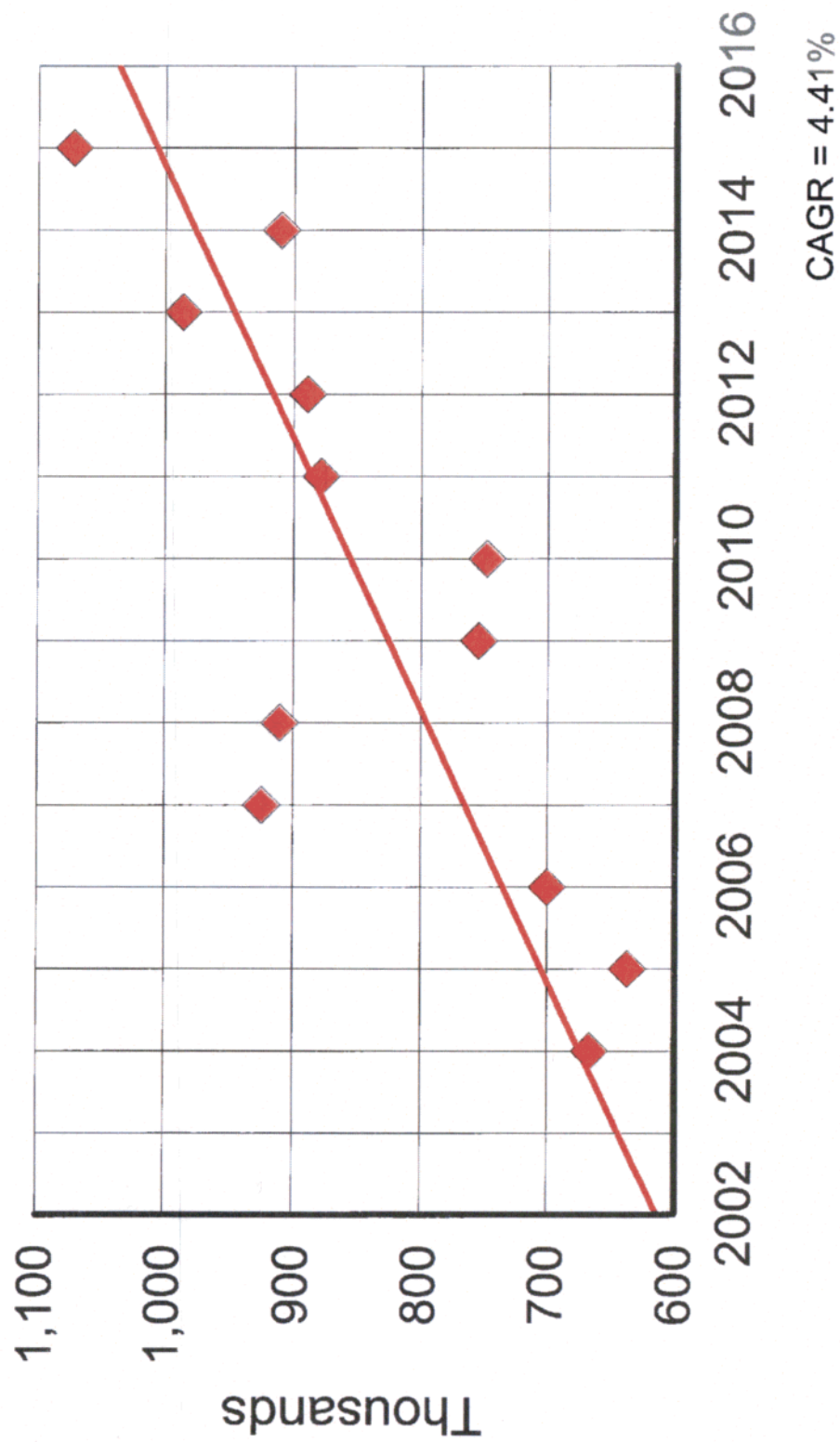
APS Retail Sales gwh
Graph 3



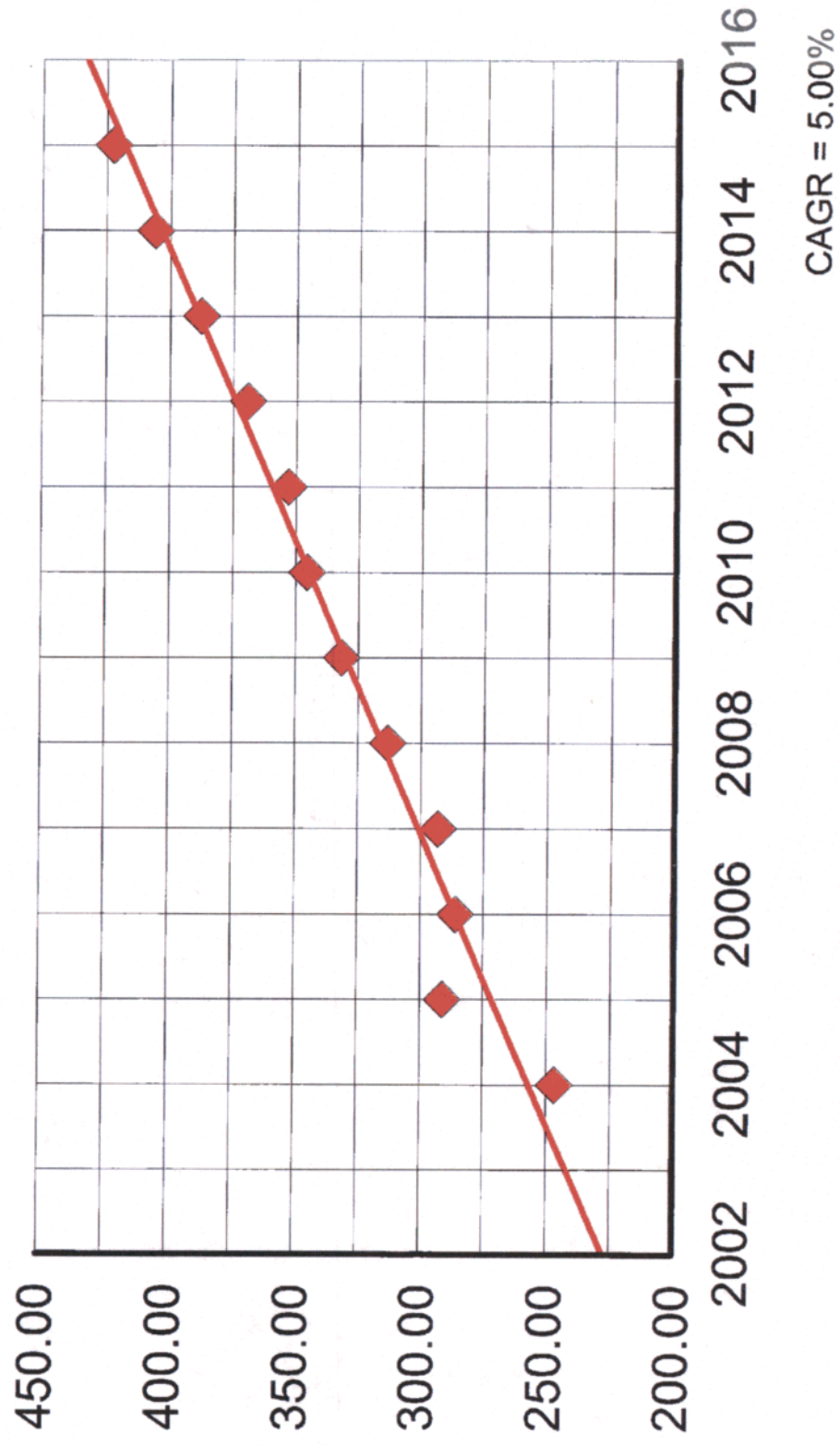
APS Depreciated Utility Plant
Graph 4



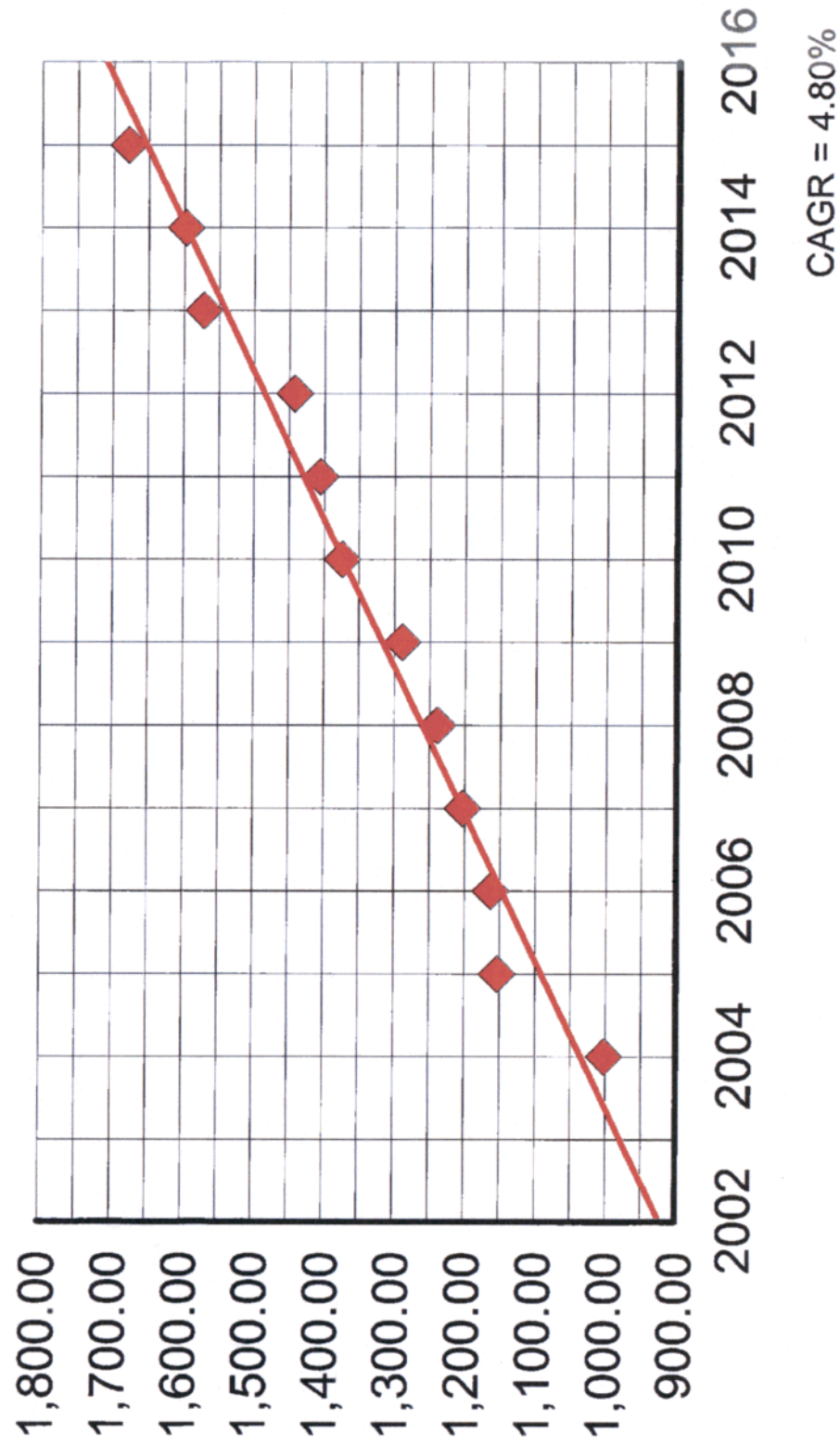
APS CapEx \$1000 Graph 5



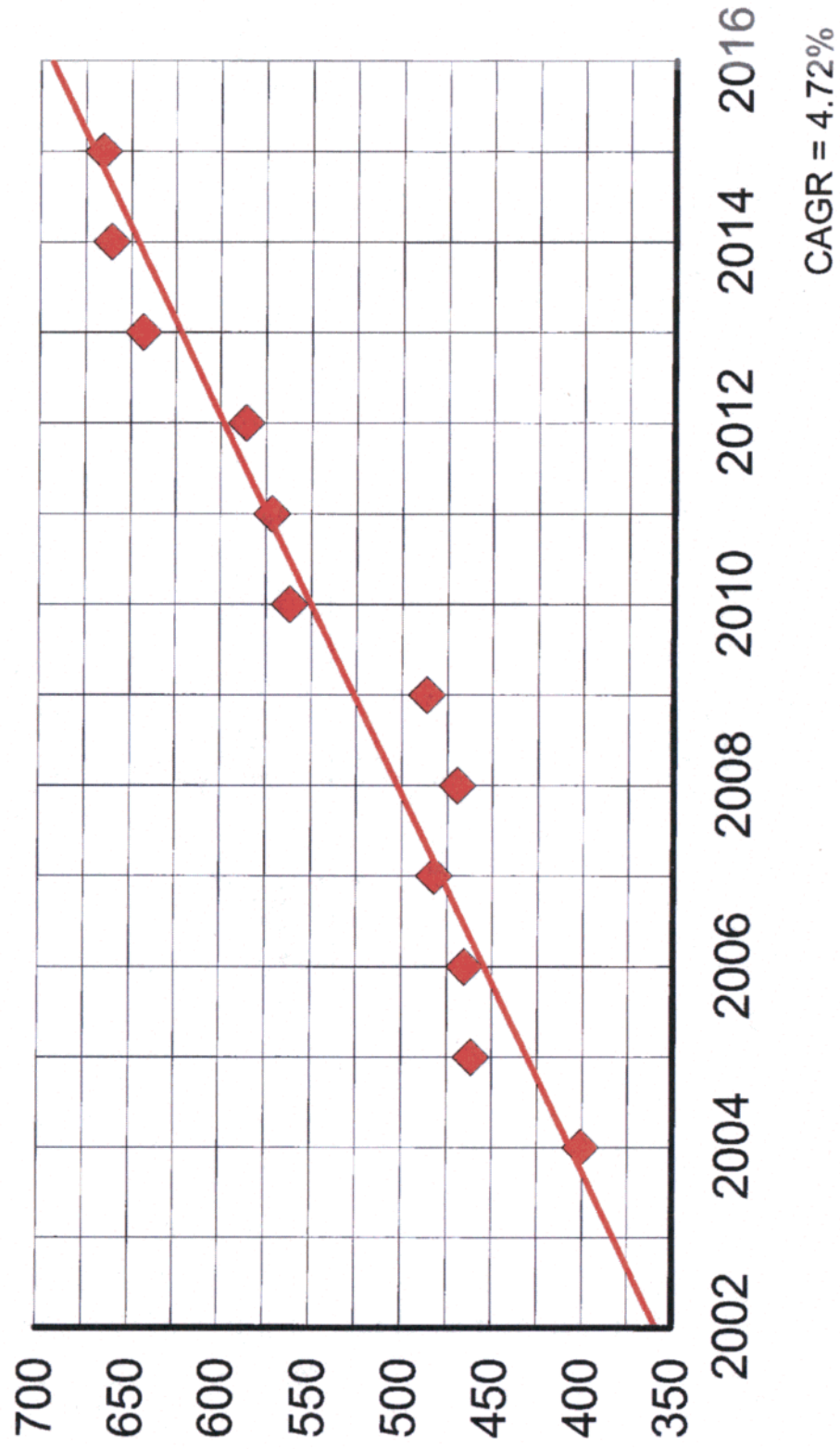
APS Depreciated Utility Plant \$/mwh
Graph 6



APS Depreciated Utility Plant \$/kw Graph 7

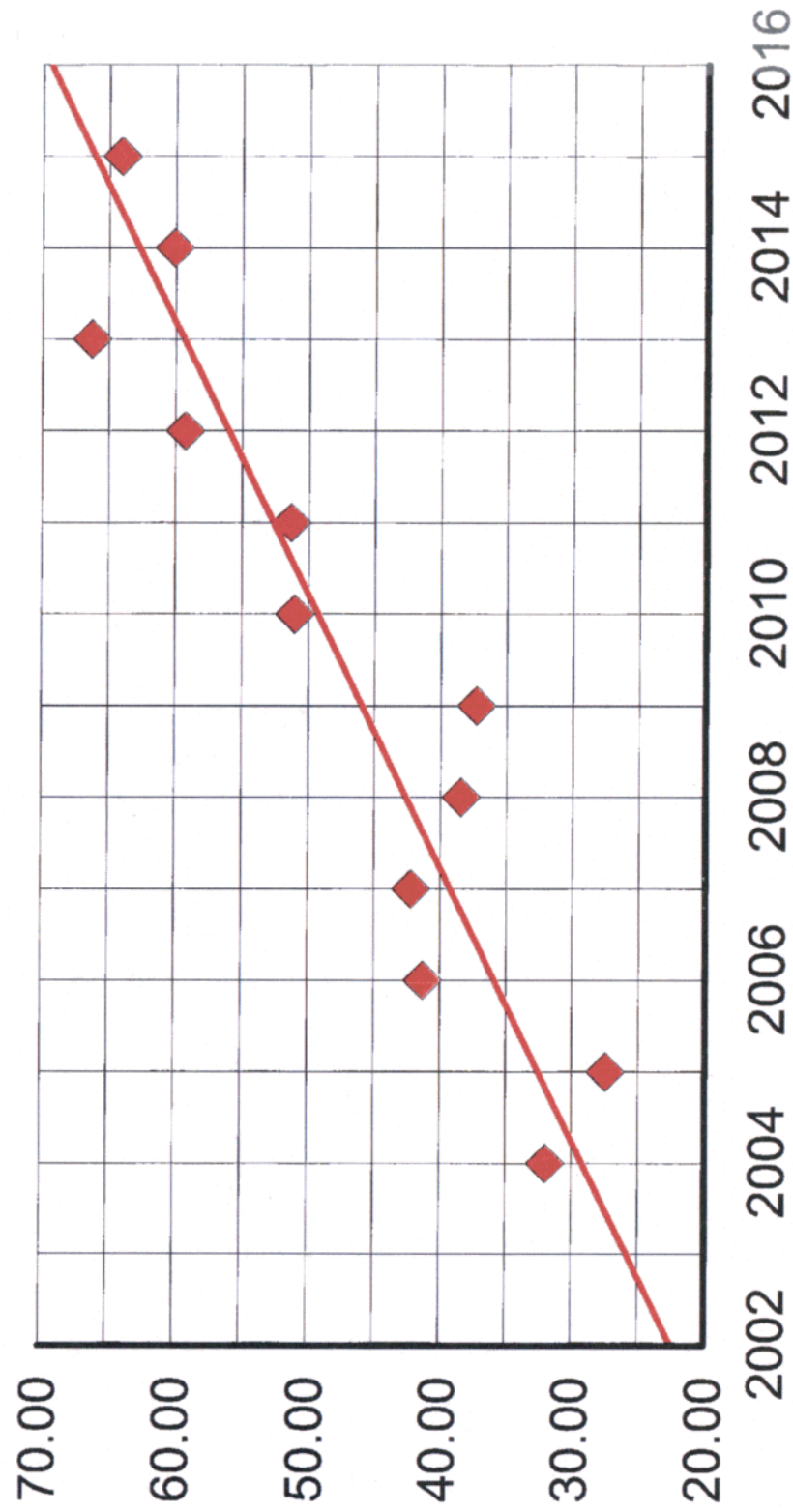


APS Stockholders Equity \$/kw
Graph 8



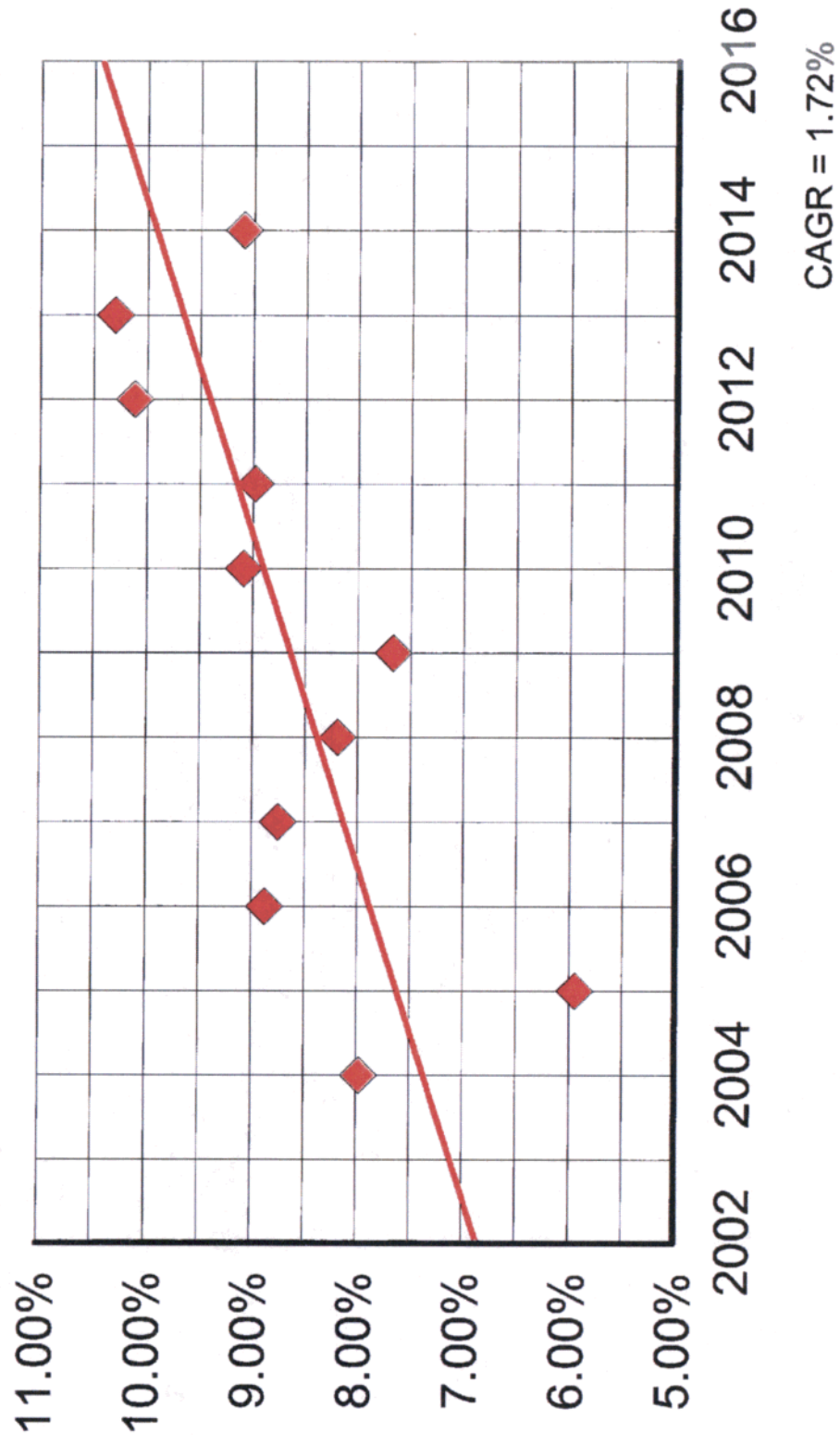
APS Net Income \$/kw

Graph 9



CAGR = 6.52%

APS Net Income As % Stockholder Equity
Graph 10



**STATEMENT OF QUALIFICATIONS
JAMES D. DOWNING, P.E.**

Education

Bachelor of Science Degree in Engineering - Mississippi State University

Professional Background

President of The Harcuvar Co., an Arizona C corporation organized in 1987. The Harcuvar Co. provides engineering, management and related services to its clients.

The Harcuvar Co. Manages Electrical District Number Eight (ED8) and the McMullen Valley Water Conservation & Drainage District (MVWCDD) under contract.

Since 1987, ED8 and MVWCDD have had contracts with APS under which APS provides transmission services, ancillary services, distribution services, line extensions of APS' distribution system to serve new District loads, and the sale of wholesale power and energy.

For 29 years, James D. Downing, P.E. has:

- (1) Worked with APS in the areas of transmission costs, ancillary service costs, distribution costs, line extension costs and wholesale power and energy costs;
- (2) Designed electricity rates for ED8 and MVWCDD;
- (3) Provided engineering services for residential, commercial and industrial developments that are APS retail customers, including the extension of APS' system to these developments.

James D. Downing, P.E. has testified before the Commission in rate cases for two water utilities.